

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Cancelled)

2. (Cancelled)

3. (Cancelled)

4. (Cancelled)

5. (Cancelled)

6. (Currently Amended) ~~A method in accordance with claim 1 A method for implementing a speckle reduction filter comprising:~~

receiving a processed data stream from a processor;

dividing the processed data stream into data subsets;

simultaneously filtering the data subsets by using a speckle reduction filter to produce filtered data subsets; and

producing an image data stream based on the filtered data subsets,

wherein the filtering step is based on adjustable parameters, the method further comprising:

changing values of the parameters between first and second value sets to form a first and second image data streams; and

simultaneously co-displaying a first image and a second image on a common screen, wherein the first image is generated from the first image data stream, and wherein the second

image is generated from the second image data stream, and further wherein the first image and the second image are speckle-reduced images using parameters of the first value set and parameters of the second value set, respectively. data stream.

7. (Currently Amended) ~~A method in accordance with claim 1 further comprising:~~

A method for implementing a speckle reduction filter comprising:

receiving a processed data stream from a processor;

dividing the processed data stream into data subsets;

simultaneously filtering the data subsets by using a speckle reduction filter to produce filtered data subsets;

producing an image data stream based on the filtered data subsets;

simultaneously co-displaying, in a dual display mode, a filtered image and an original unfiltered image on a common screen, wherein the filtered and the original unfiltered images are reconstructed from a data set that includes the image data stream and the processed data stream; and

enabling a user to enter the dual display mode at least one of during one of a scan, while a replay of pre-recorded cine loops, loops is displayed on a screen, and while a display of a still image that is not updated periodically is displayed on the screen, periodically.

8. (Cancelled)

9. (Currently Amended) ~~A method in accordance with claim 1~~

A method for implementing a speckle reduction filter comprising:

receiving a processed data stream from a processor;

dividing the processed data stream into data subsets;

simultaneously filtering the data subsets by using a speckle reduction filter to produce filtered data subsets; and

producing an image data stream based on the filtered data subsets,

wherein the filtering step is based on adjustable parameters, the method further comprising:

automatically, without user intervention, optimizing the parameters based on an application and a scan of an imaging system.

10. (Cancelled)

11. (Cancelled)

12. (Cancelled)

13. (Cancelled)

14. (Previously Presented) A method for implementing a speckle reduction filter comprising:

receiving beams from a beamformer;

frequency compounding the beams to obtain a filtered image data stream;

receiving a processed data stream from a processor;

dividing the processed data stream into data subsets;

simultaneously filtering the data subsets by using a speckle reduction filter to produce filtered data subsets;

producing a second image data stream based on the filtered data subsets; and

simultaneously co-displaying a filtered image and a second image on a common screen, wherein the filtered image is generated from the filtered image data stream and the second image is generated from the second image data stream.

15. (Cancelled)

16. (Cancelled)

17. (Cancelled)

18. (Cancelled)

19. (Cancelled)

20. (Cancelled)

21. (Cancelled)

22. (Cancelled)

23. (Cancelled)

24. (Currently Amended) ~~An ultrasound imaging system in accordance with claim 21~~

An ultrasound imaging system comprising:

a transducer array;

a beamformer;

a processor for processing a receive beam from the beamformer;

a scan converter and display controller operationally coupled to the transducer array, the beamformer, and the processor, the scan converter and display controller configured to:

receive a processed data stream from the processor;

divide the processed data stream into data subsets;

simultaneously filter the data subsets by using a speckle reduction filter to produce filtered data subsets; and

produce an image data stream based on the filtered data subsets,

wherein the scan converter and display controller includes include a central processing unit (CPU) with Single Instruction-Stream, Multiple Data-Stream (SIMD) capability that simultaneously processes the data subsets of the image data stream.

25. (Cancelled)

26. (New) A computer readable medium storing a computer program which, when executed by a processor, causes the processor to perform a method comprising:

receiving a processed data stream from a processor;

dividing the processed data stream into data subsets;

simultaneously filtering the data subsets by using a speckle reduction filter to produce filtered data subsets; and

producing an image data stream based on the filtered data subsets,

wherein the filtering step is based on adjustable parameters, the method further comprising:

changing values of the parameters between first and second value sets to form a first and second image data streams; and

simultaneously co-displaying a first image and a second image on a common screen, wherein the first image is generated from the first image data stream, and wherein the second image is generated from the second image data stream, and further wherein the first image and the second image are speckle-reduced images using parameters of the first value set and parameters of the second value set, respectively.

27. (New) An ultrasound imaging system comprising:

a transducer array;

a beamformer;

a processor for processing a receive beam from the beamformer;

a scan converter and display controller operationally coupled to the transducer array, the beamformer, and the processor, the scan converter and display controller configured to:

receive a processed data stream from the processor;

divide the processed data stream into data subsets;

simultaneously filter the data subsets by using a speckle reduction filter to produce filtered data subsets; and

produce an image data stream based on the filtered data subsets,

wherein said filtering is based on adjustable parameters, and the processor, the scan converter and display controller further configured to:

change values of the parameters between first and second value sets to form a first and second image data streams; and

simultaneously co-display a first image and a second image on a common screen, wherein the first image is generated from the first image data stream, and wherein the second image is generated from the second image data stream, and further wherein the first image and the second image are speckle-reduced images using parameters of the first value set and parameters of the second value set, respectively.